1999 Annual Report

Restructuring Subcommittee
Of the
Interagency Energy Management
Task Force

Index

Introduction

The Restructuring Subcommittee of the Interagency Energy Management Task Force was established in January 1998. At the Interagency Energy Management Task Force meeting in December 1997, it was determined that there were many issues and concerns that could impact the Federal customer during the restructuring of the electric utility industry. In an effort to provide a forum to resolve these issues, the Restructuring Subcommittee was created in January 1998 to develop goals, strategies, and guidance for Federal agencies for the purchase of electricity and other energy services in a deregulating electric power generation market.

The Restructuring Subcommittee is composed of 23 members representing the Department of Energy (DOE), Department of Defense, Department of Commerce, Department of Interior, Department of State, Department of Veterans' Affairs (VA), Environmental Protection Agency (EPA), General Services Administration (GSA), Department of Housing and Urban Development, and the National Aeronautics and Space Association. The Pacific Northwest National Laboratory (PNNL) and the National Renewable Energy Laboratory (NREL) provide technical advice. [See Attachment A: List of Members] The subcommittee was charged with developing and implementing action plans in the following areas:

- Providing a means to aggregate Federal electric power requirements
- Preparing Federal green power procurement guidelines
- Recommending appropriate Federal policy for the procurement of energy services
- Identifying stakeholders
- Communicating with and educating Federal customers
- Developing targeted technical assistance activities
- Monitoring federal and state restructuring activities

The subcommittee meets approximately every six to eight weeks to update the progress on completing items outlined in the individual action plans.

Activities Completed in FY-1999

The following activities under the Restructuring Subcommittee were completed in fiscal year 1999:

Coordination

Lead Responsibility: GSA

Develop the structure and the means to coordinate, partner, and aggregate Federal electric power requirements for the purchase of electric power and other energy services in competitive and non-competitive power markets.

- GSA completed phase one and two contracts in New York, aggregated Federal power loads in Pennsylvania for two contracts, and continues to work in New Jersey and Illinois. GSA will work to aggregate civilian Federal power loads in states as they deregulate.

- The DOD's Defense Energy Support Center (DESC) has undertaken similar activities. DESC has one contract in California and a follow-on California solicitation. DESC has finished its procurement in Illinois, awarded the second round of contracts in Pennsylvania, and completed the first round in New Jersey.

- The United States Postal Service and the Department of Navy are independently aggregating their electric power loads

- VA transferred its natural gas program to GSA, centralizing the procurement of natural gas for civilian Federal agencies under GSA.

- The establishment of an Interagency Customer Advisory Board is no longer necessary because GSA and DESC have developed and implemented effective programs for the aggregation of Federal power loads.

Green Power

Lead Responsibility: DOE and EPA

Develop options and guidance for procurement of "green" power by the Federal Government consistent with the President's climate change initiatives and Executive Orders.

- EPA, via the Subcommittee, initiated a pilot project for the purchase of half a megawatt of 100 percent green power for an EPA facility in Richmond, California. The project represents a partnership between GSA, NREL, DOE, and EPA.

- Members of the Restructuring Subcommittee are participating in the Renewable Working Group, which is developing guidance for the procurement of green power under *Executive Order 13123*. Draft guidance has already been prepared. The final version is expected in mid 2000.

- Members of the Restructuring Subcommittee are participating in the Utility Working Group developing guidance for competitive power purchases, green power purchases, and greenhouse gas reductions under *Executive Order 13123*.

- DOE's Federal Energy Management Program (FEMP) web site now includes information on renewable power under the restructuring section. The site is located from http://www.femp-restructuring.org/.

Policy

Lead Responsibility: GSA

Identify and recommend options for appropriate policy, legislative, regulatory, and Federal rule changes (e.g. FAR Part 41), and additions necessary for enabling effective Federal action related to the procurement of electricity and other energy services.

- PNNL worked with DOE to submit comments on the proposed Power Marketing Administration (PMA) rule changes on behalf of all the agencies responses to retail electric market. Current PMA rules do not permit the PMA's to continue to sell power to customers that privatize their utility infrastructure because the system then falls into the lease category. The Bonneville Power Administration proposed to relax these standards to allow for the lease of distribution systems to qualify for public power supplied by PMAs.

Stakeholder Identification

Lead Responsibility: DOE

Identify potential stakeholders, partners, and allies and engage them in appropriate ways to effect the implementation of such programs, policies, and other actions necessary to realize concerted Federal action in a restructured electric power generation market.

- PNNL conducted three email surveys for FEMP to reach other Federal participants.
  - Survey 1 was used to determine the communication and training needs of the public. The results indicate that the public is already getting information on utility restructuring but would prefer that it came from a Federal source. [See Attachment B: Survey 1 Results]
  - Survey 2 focused on metering and billing issues. The results indicate confusion about metering and billing after deregulation has taken effect. There were unanticipated billing errors and agencies were looking to FEMP to provide further information and guidance on the topic. [See Attachment C: Metering and Billing Issues for Federal Agencies: Briefing for the Interagency Energy Task Force] FEMP will continue to monitor this topic and is considering putting together a workshop and trade show to assess Federal needs in this area.
  - Survey 3 was about Federal interest in and the need for assistance with distributed generation. Response was limited but those who did respond were keenly interested in pursuing distributed generation. FEMP will continue to monitor the topic and coordinate with other Department of Energy initiatives. The email database used in completing the survey continues to be maintained for the purposes of any additional desired surveys and for use in dissemination of current information regarding activities related to utility restructuring.

Communication/Education

Lead Responsibility: GSA and DOE

Develop the structure and means to effectively communicate with and educate Federal customers on the issues and status of electric power industry restructuring, emerging Federal policies and actions, and other related information.

- Through the efforts of PNNL, NREL, and Lawrence Berkeley National Laboratory (LBL), a restructuring web site was added to the FEMP home page in December 1999. [See Attachment D: FEMP's Utility Market Restructuring] The restructuring page addresses electric and natural gas

restructuring issues from the perspective of facility managers and procurement officials. Subsections on renewable energy programs, green power purchases, and energy management opportunities are being developed. The site is located from http://www.femp-restructuring.org/.

- GSA, FEMP, and PNNL held a Metering & Billing Round Table in December 1998 to discuss customer experience on the process of for engaging competitive markets, reactions to new billings systems after deregulation, and prospects for analysis of energy data resulting from enhanced energy use data being made available. [See Attachment E: Report to the Inter-Agency Task Force, Restructuring Subcommittee] FEMP and GSA are considering following up the round table discussion with trade show to match the metering and billing needs of Federal agencies with commercial contractors and vendors.

Technical Assistance

Lead Responsibility: DOE

Identify and develop targeted technical assistance and tools for Federal customers that would assist in efficient and effective management of electric power and other energy services procurement in competitive and non-competitive electric power generation.

- PNNL drafted a Deregulation Primer, with funding made available from GSA, to serve as a guide for procuring energy services in a deregulated utility environment. The document will be available in printed and online formats. The printed document is now being completed. The online format will be available by the end of the third quarter of FY-2000 on the FEMP web site.

Monitoring Restructuring Activities

Monitor Federal and State deregulation activities to collect the latest information on Federal and State deregulation legislation to ensure that the Federal agencies are aware of possible legislative changes which can assist or hinder them in obtaining the best opportunities for purchasing electricity for their facilities.

- There is a link on the FEMP restructuring web site to directly access state-by-state restructuring information, legislative activities at the Federal level, and an update on public benefits programs. Energetics continues to prepare state restructuring summaries for PNNL and FEMP for distribution to the Restructuring Subcommittee. [See Attachment F: State-By-State Restructuring Update] GSA also provides links to restructuring information from its website.

Status of Action Plans

The Restructuring Subcommittee met on October 29, 1999, to review the mission statement and determine the future direction of the subcommittee. This review was prompted by the signing of *Executive Order 13123, Greening the Government through Efficient Energy Management,* and other regulatory changes that affect the mission and goals of the Restructuring Subcommittee. Individuals designated as the lead on an action item were asked to report on the status of the plan and provide recommendations for the

future direction, if any. As a group, members were asked to comment on the future of each action item. The subcommittee made the following decisions.

- **Action Plan #1**—Develop the structure and means to coordinate, partner, and aggregate Federal electric power requirements for the purchase of electric power and other energy services in competitive and non-competitive electric power generation markets.

The structure and means to aggregate Federal customers is in place; this action is complete and the Restructuring Subcommittee agreed to close the item.

- **Action Plan #2**—Develop options and guidance for procurement of "green power" consistent with the President's climate change initiatives.

The original directive, the President's climate change initiative, is no longer applicable. The Renewable Working Group is covering these issues. **The Restructuring Subcommittee will continue to discuss and promote green power purchases; this action is complete and the subcommittee agreed to close the item**.

- **Action Plan #3**—Identify and recommend options for appropriate policy, legislative, regulatory, and Federal rule changes (e.g. FAR Part 41), and additions necessary for enabling effective Federal action related to the procurement of electricity and other energy services.

Other groups, both the Utility and Renewable Working Groups and the FAR Policy Committee, are dedicated to these issues. Therefore, **it is no longer necessary for the Restructuring Subcommittee to focus on this action plan; the subcommittee agreed to close the item**.

- **Action Plan #4**—Identify potential stakeholders, partners, and allies and engage them in appropriate ways to effect the implementation of such programs, policies, and other actions necessary to realize concerted Federal action in a restructured electric power generation market.

The Restructuring Subcommittee will continue to expand its network in order to facilitate the exchange of information for the implementation of policies, programs, and actions under its communication component, as indicated below. **The action is complete and the subcommittee agreed to close the item**.

- **Action Plan #5**—Develop the structure and means to effectively communicate with and educate Federal customers on the issues and status of electric power industry restructuring, emerging Federal policies and actions, and other related information.

This action plan will now become Action Plan #1 and all Restructuring Subcommittee activities will fall under the communication component. **Action is ongoing**.

- **Action Plan #6**—Identify and develop targeted technical assistance and tools for Federal customers that would assist in efficient and effective management of electric power and other energy services procurement in competitive and non-competitive electric power generation markets.

The Restructuring Subcommittee lacks the resources necessary to develop tools but it can put Federal agencies in touch with the appropriate information and tools under the new Action Plan #1. Therefore, **action is no longer necessary and the item is closed**.

- **Action Plan #7**—Monitor Federal and state deregulation activities.

These activities are already being accomplished both within FEMP and through other sources. **Action by the Restructuring Subcommittee is no longer necessary and the item is closed**.

Future Activities

The Restructuring Subcommittee agreed that the original Action Plan #5 is now the primary action item and all other issues and activities will fall under the broad umbrella of communication. The communication component has been integrated into the objective statement. [See Attachment G: Restructuring Subcommittee of the Interagency Energy Management Task Force] The Restructuring Subcommittee will develop and maintain the structure and means to effectively communicate goals, strategies, and guidance to Federal agencies in a restructured utility market. This will include information on the purchase of energy and emerging competitive procurement options as well as other services available from utilities to Federal agencies. The subcommittee will carry out a comprehensive communication/education plan by expanding the email database to publicize restructuring information and conferences. The Restructuring Subcommittee is proposing to coordinate communication between the Interagency Energy Management Task Force and the appropriate *Executive Order 13123* Working Groups as they develop guidance and goals for the implementation of *E.O. 13123,* as long as the working groups are in existence. The subcommittee will facilitate discussion of the issues related to Federal energy purchases and publicize procurement information and case studies. While Restructuring Subcommittee will continue to be a forum to address procurement issues, the group will shift its focus to advocacy and information dissemination.

Attachment A

List of Restructuring Subcommittee Members

Tim Arthurs	Department of State
Bruce Blank	Defense Energy Support Center, Department of Defense
Brad Gustafson	Department of Energy, Federal Energy Management Program
Tom Hamilton	Department of Housing and Urban Development
Amy Hudson	General Services Administration
Steve Huff	Department of Energy
Jacob Moser	Defense Energy Support Center, Department of Defense
Kurt Johson	Environmental Protection Agency
Rick Klimkos	Department of Energy, Federal Energy Management Program
Lu Kormeluk	General Services Administration
Lindsey Lee	General Services Administration
Virgil Ostrander	General Services Administration
Chandra Shah	National Renewable Energy Laboratory
Beth Shearer	Department of Energy, Federal Energy Management Program
Ken Shutika	General Services Administration
Anne Sprunt Crawley	Department of Energy, Federal Energy Management Program
Tom Trujillo	Department of Veteran's Affairs
Mike Warwick	Pacific Northwest National Laboratory
James Watson	General Services Administration
Richard Wickman	National Aeronautics and Space Administration
Phil Wirdzek	Environmental Protection Agency
Jim Woods	Department of Commerce
Don Zieman	National Parks Service

Attachment B

Survey 1 Results

1 The following best characterizes my area of work:

[ ] Facility management	46	27.06%	[ ] Energy Management	54	31.76%
[ ] Contracting	21	12.35%	[ ] Environmental Managemen	4	2.35%
[ ] Budget/Finance	3	1.76%	[ ] Procurement	7	4.12%
[ ] Legal	2	1.18%	[ ] Other (please specify):	33	19.41%
Total:	**170**	100.00%			

2 How does electric utility restructuring relate to your job?
See # 2 - Comments tab

Knowledge of Electric Utility Restructuring

3 How familiar are you with restructuring of the electric utility industry?

[ ] Very familiar	37	25.34%
[ ] Somewhat familiar	88	60.27%
[ ] Not familiar	21	14.38%
Total Responses:	**146**	100.00%

4 Are you receiving sufficient updates and information to assess the status of retail utility competition in the states where your facilities are located?

	[ ] YES		[ ] NO	
	69	51.11%	66	48.89%
Total Responses:	**135**			

Staff:
Includes email newsletters, clippings, etc.

5 From what sources do you obtain information on electric utility restructuring?

[ ] Newsletters	83	20.85%	[ ] E-mail	64	16.08%
[ ] Periodicals	68	17.09%	[ ] Newspapers	60	15.08%
[ ] Technical reports	30	7.54%	[ ] Seminars	60	15.08%
[ ] Other (please specify):	33	8.29%			
Total Responses:	**398**	**100.00%**			

6 How satisfied are you with each of these?

Source	Very Satisfied		Satisfied		Not Satisfied		**Total Statements of satisfaction level:**
[ ] Newsletters	19	21.84%	53	60.92%	15	17.24%	**87**
[ ] Periodicals	12	15.58%	50	64.94%	15	19.48%	**77**
[ ] Technical reports	7	20.59%	20	58.82%	7	20.59%	**34**
[ ] Newspapers	4	6.06%	33	50.00%	29	43.94%	**66**
[ ] Seminars	15	25.86%	32	55.17%	11	18.97%	**58**
[ ] Other	15	55.56%	10	37.04%	2	7.41%	**27**

7 In what topics are you interested in receiving information and guidance?

[ ] Contracting and procurement	68	6.34%
[ ] Utility accounting and budgeting	48	4.47%
[ ] Evaluation of competing electric generation supply sources	74	6.90%
[ ] Aggregated purchasing	50	4.66%
[ ] Green power purchasing	57	5.31%
[ ] Consultation services	31	2.89%
[ ] Reliability	54	5.03%
[ ] Power quality	45	4.19%
[ ] Enhanced billing	28	2.61%
[ ] Load management analysis and assistance	56	5.22%
[ ] Energy efficiency services	82	7.64%
[ ] Training opportunities	66	6.15%
[ ] Status of deregulation in my state	72	6.71%
[ ] Status of deregulation in the nation	68	6.34%
[ ] Changing Federal policies due to restructuring	91	8.48%
[ ] Technology developments	76	7.08%
[ ] Financial futures, options and derivatives	31	2.89%
[ ] Negotiation with your local distribution company	51	4.75%
[ ] Communication services	25	2.33%
Total:	**1073**	**100.00%**

8 Would you like to receive additional information about utility restructuring and changing energy markets for free via FEMP?

YES [ ]	NO [ ]
115	19

? If YES, what is the preferred mode of receipt?

Total: 134

% to Total "YES" Responses: 53.91%

Newsletter mailed to my office

Frequency of newsletter:		
[ ] Daily	1	1.61%
[ ] Weekly	2	3.23%
[ ] Bi-weekly	9	14.52%
[ ] Monthly	36	58.06%
[ ] Quarterly	14	22.58%
	62	**100.00%**

Electronic newsletter sent to my e-mailm address

Frequency of newsletter:		
[ ] Daily	2	2.02%
[ ] Weekly	37	37.37%
[ ] Bi-weekly	19	19.19%
[ ] Monthly	32	32.32%
[ ] Quarterly	9	9.09%
	99	**100.00%**

% to Total "YES" Responses: 86.09%

8 Cont'd. Would you like to receive additional information about utility restructuring and changing energy markets for free via FEMP?

		Web-site delivery (information posted daily on)		
		FEMP Web-site for review by you when you want	38	
% to Total "YES" Responses:	**33.04%**			
		Periodic seminars or conferences		
			Frequency of seminars or conferences:	
		[ ] Quarterly	11	20.37%
		[ ] Semi-annual	29	53.70%
		[ ] Annual	14	25.93%
% to Total "YES" Responses:	**46.96%**		**54**	**100.00%**

The need for timely, detailed information increases when utilities are restructured in your state. Educating Federal staff on the impacts of restructuring is also a FEMP objective. We would appreciate your feedback on various training modes and your comments about how FEMP should provide you with training on this topic.

Preferred Training Methods - Please note that many persons who responded "Yes" to the initial question did not respond giving their like or dislike of the format on questions 9 - 13 below.

9 Have you ever participated in a "Telecourse" (i.e., a training course in which the instructor is "live" via television and can be asked questions)?

Total Responses:	YES [ ]		NO [ ]	
141	61	43.26%	80	56.74%
	If YES, did you like the format?			
	YES [ ]		NO [ ]	
	39	63.93%	18	29.51%

Why or why not? **See # 9 - Comments tab**

10 Have you ever participated in a video training course (i.e., a course in which the instruction was taped previously and the instructor cannot be queried)?

Total Responses:	YES [ ]		NO [ ]	
139	77	55.40%	62	44.60%
	If YES, did you like the format?			
	YES [ ]		NO [ ]	
	39	50.65%	34	44.16%

Why or why not? **See # 10 - Comments tab**

11 Have you ever used an interactive "web-based" training tool (i.e., a tool located on the Internet where questions can be asked and answered)?

Total Responses:	YES [ ]		NO [ ]	
142	34	23.94%	108	76.06%
	If YES, did you like the format?			
	YES [ ]		NO [ ]	
	23	67.65%	6	17.65%

Why or why not? **See # 11 - Comments tab**

12 Have you ever used a non-interactive "web-based" training tool (i.e., a training tool located on the Internet where information is provided but you cannot post questions)?

Total Responses:	YES [ ]		NO [ ]	
101	28	27.72%	73	72.28%
	If YES, did you like the format?			
	YES [ ]		NO [ ]	
	17	60.71%	7	25.00%

Why or why not? **See # 12 - Comments tab**

Great use of technology

13 Have you ever used a CD-ROM based training tool (i.e., a CD-ROM that presents training information, similar to video training materials)?

Total Responses:	YES [ ]		NO [ ]	
136	51	37.50%	85	62.50%
	If YES, did you like the format?			
	YES [ ]		NO [ ]	
	37	72.55%	10	19.61%

Why or why not? **See # 13 - Comments tab**

14 Which training methods would you most likely use (please rank them 1-5)?

	1		2		3		4		5		Total by Method
[ ] Telecourse	29		14		12		10		25		**90**
[ ] Video Training Course	11		21		13		21		23		**89**
[ ] Interactive web-based training tool	26		25		16		12		7		**86**
[ ] Non-interactive web-based training tool	5		16		17		29		21		**88**
[ ] CD-ROM Based training tool	21		17		27		12		10		**87**
								Total Responding to Methods:			**440**

15 Would you find a telephone hotline for utility restructuring/procurement useful?

Total Responses:	YES [ ]		NO [ ]	
136	58	42.65%	78	57.35%

Why or why not? **See # 15 - Comments tab**

Attachment C

Metering and Billing Issues for Federal Agencies: Briefing for the Interagency Energy Task Force

Metering and Billing Issues for Federal Agencies

Briefing for the Interagency Energy Task Force

by Mike Warwick - PNNL

mike. Warwick@pnl.gov

Problems

- Problems today
  - Complex bills
  - Billing errors
  - New suppliers with deregulation
  - Difficulty getting back-up data
- No uniform way to manage data

Problems vary by Agency

- GSA pays bills centrally - fewer problems
- Military & DOE decentralized - more problems
- No easy way to compile data across agencies or state/regions

Opportunities

- Enhanced data from better metering -
  - Will reduce billing errors
  - Provides needed data for competitive energy procurements (including renewable and CHP)
  - Facilitates data gathering, use monitoring, etc. across agencies and states/regions
  - Guides energy audits and efficiency investments

Solution

- Standardize & enhance metering
- Increase attention to bills
- Establish uniform data handling protocols & software
- Improve access to energy use data and use for enhanced energy use reporting

First Step: Cooperation/Education

- Common problems, uncoordinated responses
- Active commercial market for needed tools
- Need to survey agency experience & coordinate Federal response to the market to ensure compatibility

Step Two: Establish Expectations/Guidelines/Standards

- Metering & billing more than meets the eye: its a chain - meter, com system & decoder, database, and billing engine
- Assess value of data exchange across agencies and states/regions
- Assess value of sub-metering
- Apply potential of better data to policies directives

Recommended Actions

- Convene a workshop/conference to present/discuss issues and engage commercial market
- Present outcomes to IATF and solicit support to implement action plan
- Monitor topic through the Restructuring Subcommittee

Attachment D

FEMP's Utility Market Restructuring Home Page

Utility Market Restructuring

FEMP's Utility Market Restructuring

Topics

Electric

Glossary / Primer

Ask an Expert

FEMP Resources

Contact Us

Helpful Links

Disclaimer

Welcome Page

Welcome to FEMP's utility restructuring Web site. Here you will find information for Federal facility managers that procure energy commodities. Clicking the categories listed in the left panel will take you to information that will help you procure energy. This site is specifically designed for Federal facility managers to provide pertinent information to help you understand the markets and better serve your organization.

Our first priority has been to provide information about the electric utility market. Coming soon will be similar information for the natural gas markets. In the next few weeks, the Web site will also include a primer and detailed glossary to describe how electric restructuring works and what it means to Federal procurement officials. The primer/glossary section is currently under construction. The FEMP Resources section will introduce you to other FEMP resources that can help fulfill your mission. You can give us feedback or ask an expert specific questions in the Contact Us section.

Some documents on this or linked sites are saved as PDF files. These files require a free copy of Acrobat Reader to access them. Click this link to get a free copy of Acrobat Reader.

In Development

Gas
Energy Management
Renewable Resources

Future Topics

Attachment E

Report to the Inter-Agency Task Force (IATF), Restructuring Subcommittee

Energy Data Management: Issues and Opportunities

Introduction

The issue of Energy data management (metering and billing services) is critical in deregulated energy markets for three reasons. First, in order to advise prospective energy vendors of your needs, you must have accurate, comprehensive energy use data. Typically, this includes rate information, monthly use information, and hourly load data for large accounts. This information must be specific to each utility meter! Second, access to this kind of quality information allows facility managers to adapt to changing market conditions in ways that can significantly reduce total energy costs. This is especially critical in fully open markets like California, where energy prices can vary hour-by-hour. Finally, billing cycle services are increasingly part of the energy purchase decision. For example, large customers in California do not have access to their old utility meter if they choose an alternative supplier. Thus, Federal customers need to be educated of the various options available for metering, billing, and energy data management. This need was articulated to FEMP and GSA by Federal agencies and procurement agents in deregulating states over the past year (1998).

The issue of data management is more complex than it appears. The power meter is only one choice in an inter-related series of choices; however, it is where most customers focus the bulk of their attention. The meter is the first link in a chain that includes mechanisms to meter, software to collect and store meter data, and other software that allows manipulation and comparison of energy use information.

Most modern meters are capable of being integrated with a variety of communication technologies that allow remote meter reading. These communication systems are very expensive to deploy. Similarly, most modern meters can be accessed (read) remotely using common software. However, moving this information from the meter reading software into an energy management and analysis environment is not automatic.

Given the level of interest and importance of energy data management, the IATF Subcommittee on Restructuring initiated a series of activities to further explore the subject. This progress report summarizes the activities initiated by DOE under the Technical Assistance Task of the Subcommittee.

Progress Report

Activities to date include a quick survey of the market and a similarly abbreviated needs assessment.

Market Survey Results

The market survey consisted of two primary activities. The first was the collection and review of vendor information and limited vendor and user interviews. The bulk of this activity was accomplished incidentally in the course of participation in energy conferences and trade shows. The second effort was participation in a conference and trade show specifically on the subject.

Competitive pressures resulting from deregulation have spawned a small but growing number of firms that can offer turn-key solutions to the energy data management challenge, including metering, communication system access, and appropriate software. Active firms include large commercial vendors of meters, communication systems, and energy reporting software. In addition, there are numerous smaller firms offering specialized hardware and software solutions. The selection of a vendor/partner needs to be informed by the need for timely (real-time or near real-time) access to remote meter data, the number of meters being accessed in an area, and the kinds of reports and analyses desired from the energy reporting, or billing software.

Meters with a variety of capabilities are available from a number of reputable vendors. These range from meters that have to be read manually to ones that can essentially read themselves and relay the readings via a variety of communication networks. The least capable power meters, which are most commonly used by utilities for revenue metering, are relatively inexpensive and primarily available from four major suppliers of meters to the utility industry. Although these firms offer meters with other capabilities, the most innovative meters are generally from other vendors. Most of the innovative vendors have been competing with the major firms for years with little success. However, deregulation has provided a huge market for enhanced meters and these new market entrants seem to be coming into their own.

Two meter enhancements are very useful. The first is the ability to automatically read and store information within the meter. The second is the ability to transmit that information from remote sites to a central collection point. Meters that essentially read themselves allow users to collect data in a form that more closely corresponds to the way power is produced and sold. As deregulation proceeds, power prices will vary on an hourly or more frequent basis, which almost requires this metering capability.

Time-of-use metering is only half the needed capability. The other half is having ready access to the data. At present, time-of-use metering data can be retrieved after the fact using manual reading devices as well as remote reading methods. Only remote reading techniques permit real-time or near real-time display of the data. This capability is primarily of value only if real-time access to metering information is needed. Generally, this capability is not required if the utility rate schedule does not have a real-time component. The vast majority of utility rates are time-of-use, at best. As a result, customers already know from the rate schedule when power prices will be highest, namely during the peak use period. Data from time-of-use meters can be used to monitor use during those periods after the fact and evaluate strategies to reduce peak period use.

Remote retrieval of time-of-use meter data is also valuable if a customer or power supplier wants to monitor energy use in real-time or to collect time-of-use information from sites that are too difficult or costly to read manually.

Remote access to meter data is provided using some kind of communication network. Some meter communication networks are unique to the power industry, such as power line carrier based systems. These systems use the power line itself to transmit information. As a result, they require cooperation with the local utility to use the power line and generally are limited in their range to the local utility service area. Other systems use more readily available networks, including wired and wireless telephone systems. The primary criterion for selecting a communication system is the number of points to be metered within an area and the frequency that data is collected.

Specialized communication systems require substantial infrastructure investments. This contrasts with telephone based systems that require little infrastructure but have high costs for phone line extensions, monthly phone service, and individual telephone calls. Retail utilities are the most likely to install dedicated meter communication systems. Power marketers that service customers across the nation typically use some form of telephone access. Unfortunately, translating meter readings over communication systems is an area where there is little standardization. In general, each make of meter speaks a different language. This makes it difficult to collect meter data from a variety of different makes of meters. Fortunately, there are firms that offer software that is capable of reading data from virtually all meters.

Once meter data has been collected, it needs to be stored and analyzed. The primary analysis is to convert meter readings into bills through application of the appropriate rate schedule. Although there is a variety of good quality energy reporting software, not all of it includes the capability to translate time-of-use meter readings into equivalent bills. In addition, most of the available software requires the specific tariff to be entered into it as a formula. In other words, you cannot just select a rate schedule from a menu and expect to get the correct result. Entering tariff information can be a significant burden, especially if the user has many sites but only a few in each utility service area. It should be noted that even after deregulation, local distribution utilities will continue to use tariffs. In fact, it is reasonable to expect these tariffs to change frequently and significantly as utilities restructure.

The commercially available energy management software is generally excellent at allowing users to combine data from multiple meters, generate graphs and reports, and so on. However, the needs of Federal agencies vary so that no one package may be adequate for all. The U.S. Postal Service is working with a vendor of one of the major reporting packages and has requested custom features to meet its needs. These allow it to track all "utilities," including water, sewer, electricity, gas, and solid waste; it also facilitates comparisons of the different utilities in units or dollars. Comparisons can be made over time for one site, across multiple sites, and against benchmarks, such as average use per square foot for the region.

FEMP staff from PNNL was invited to participate in a metering and billing workshop and trade show in February 1999. A trade association for west coast utilities hosted the workshop. Over 100 metering and billing professionals representing scores of mostly small to medium size utilities attended the workshop. The major metering and software vendors were well represented. It was evident from this event that the primary market for metering systems and billing software, as expected, is utilities rather than power marketers or multi-location customers. The metering systems are generally designed to be implemented in a restricted area rather than nationwide. Accordingly, these solutions tend to assume relatively large numbers of metering points and sufficient volume to support a local network of communication relay stations that are tied to a central point using landline telephones.

Similarly, the software is basically designed to process large volumes of metering readings and to provide a limited range of reports to customers. Nevertheless, the software is sufficiently flexible to allow consumers to generate most reports of interest. As noted previously, most software vendors are willing to accommodate new reporting requirements. In fact, one of the virtues of working with a commercial vendor is that these requests are almost always incorporated into later versions of the software. As a result, all users eventually benefit from the customization requests of other users at essentially no cost.

Another important observation from the workshop was that most of the utilities present were not well prepared to face potential demands from customers to provide more sophisticated metering. This is probably due to the lack of need for time-of-use data because of a paucity in time-of-use rates in the region. Nevertheless, deregulation in the region will bring markets where electricity prices vary hourly. It was also apparent that these utilities are driven more by regional politics, especially the pace of utility reform, than by interest in meeting customer needs. Specifically, the utility representatives did not seem particularly concerned that a customer with multiple locations, including one in their territory, might require sophisticated metering sooner than the utility was prepared to provide it. This attitude is probably not confined to the west coast and probably foreshadows future conflicts between the desires of Federal customers for uniform metering and reporting and local utilities.

To get insight into these issues, a Metering and Billing Round Table Discussion was held in New York City in December 1998.

Round Table Discussions

The objective of the Metering and Billing Round Table was to discuss customer experience in the process of engaging competitive markets, reactions to new billing systems after deregulation, and prospects for analysis of energy data resulting from enhanced energy use data being available.

Customer experience with deregulated markets: California and New England states were the first to deregulate. Customers in California had a reasonable lead-time to prepare

prior to choice. Deregulation in New England, especially in Massachusetts, the most populous state, was more ad hoc. The rules for competition continued to change until a month before choice became available. Competition in these states, and all subsequent ones, is for the energy component of each customer bill. Although aggregation of loads is permitted for energy supply, aggregation of individual meters into a single account is not. In other words, numerous small accounts cannot be merged to form one large account that is eligible for a different rate based on size.

Customers searching for alternate suppliers need to compile information about their accounts and usage. This includes information about the local utility, current tariff, meter and account number, and a year or so worth of consumption history. At a minimum, consumption needs to include monthly billing data, such as total energy use (kWh) and peak demand (kW). If the account is billed on a time-of-use basis, energy and demand data needs to be presented in time-of-use format (e.g., the quantity of energy used during each TOU period and the associated demand). Most large accounts are billed on a TOU basis that incorporates a recording demand meter, a meter that registers consumption on a 15, 30, or 60-minute interval throughout the month. Typically, this is called "hourly meter data" although the actual recording interval may vary. Prospective suppliers want to see this data for a year as well. As a result, customers have to collect an extensive amount of information prior to searching for a supplier.

In some cases, utility billing information is not easily accessible. Generally, the bill is paid by accounts payable (e.g., contracts). Key billing statistics, such as total use and total bill, may be recorded or passed on to facility and energy managers. Nevertheless, all of the key data for competition is included with the bill, including TOU statistics and meter and account identifiers. Utilities rarely provide hourly load data with bills, but it is available upon request, usually for up to 13 months. Some utilities charge for this data.

The most difficult part about compiling load data for aggregation is getting access to the data from utilities or customers. Most facility or energy managers do not keep a file with a year of utility records. As a result, someone has to take time to research these bills or work with the utility to uncover the historic information. Coordinating such data collection is a thankless and time-consuming task. Ultimately, it will take efforts by the aggregator to acquire all of the needed data, so the sooner that process starts, the better. However, some utilities are reluctant to provide billing data to someone other than the organization listed on the bill. For example, if the bill is in the name of the Fish and Wildlife Service, they will have to grant a waiver, in writing, so others can receive billing data. It makes no difference to the utility that GSA ends up paying the bills at that location.

Participants who went through this process in all deregulated states found value in having data available. Other uses for the information include reviewing consumption trends, comparing usage across sites, and pinpointing high use/high cost periods as targets for information left participants with ongoing interest in retaining this information in a central data bank to avoid a report of their efforts later. This latter point raised a related issue about how to preserve access to this information. Most new power suppliers can

provide access to the data, but some may only provide access on a proprietary software system or through graphic, rather than tabular, reports. It is critical to retain direct access to all the raw data including information that links the data to specific meters, account numbers, and locations.

Customer reactions to new billing systems: Many Federal customers are served through an intermediary like GSA. The bills to go GSA or someone in contracts and never rise to the point where they become obvious. This all changes with deregulation when power is purchased through a buying pool by an aggregator. The transition should be seamless, but there were transition problems reported by most participants. Participants from California indicated that erroneous billing has been a big problem. The new bills are higher than utility costs when they should be lower. Monitoring and correcting these bills is eating up any savings in Federal staff time. Not all participants held this view. Instead, most felt that some rough spots should be expected. However, it was mostly the aggregators themselves holding this position instead of the customers they aggregated. Most of the burden of sorting out billing problems falls to the aggregator, so the fact that most of them were pleased is an endorsement of the process. The fact that some participants were unhappy may point out the need to better educate customers to the likelihood of start-up problems.

Customer reactions to prospects for enhanced utility data: Participants were shown sample report graphics to stimulate discussion of the kinds of reports and information that may be provided from energy reporting software. The examples included:

- Hourly prices for a month
- Hourly prices for several months
- Hourly prices ranked from high to low for a month
- Graphic representation of a Time-of-Use rate design (illustrating when costs change and how much)
- A daily load shape
- Daily load shapes for multiple days
- Comparison of utility (power, water sewer, gas, taxes, and solid waste) for one site on a $/Sq. Ft. basis
- Comparison of various utilities across multiple sites (i.e., energy cost/Sq. Ft. for several sites)
- Comparison of the cost of a selected utility for multiple sites with a benchmark (i.e., what sites are above or below an average)

Most of the illustrations were well received. However, many of the graphics show were unfamiliar to participants, which limited discussion. In other words, if a participant was not used to working with data in a specific format, they were not necessarily able to say "Yeah, that's great!" Reactions were better if participants could identify a reporting requirement or other need for the specific graph. In some cases, participants already use the data in spreadsheets so they were resistant to the idea of having to re-enter it elsewhere. The bottom line was best summarized by one participant wo said, "You are the experts. You should tell us what we should want."

Conclusions

The purpose of these activities was to review the status of commercial markets for metering and billing products and services and begin to engage Federal customer sin the identification of their needs. The goal is to try and take advantage of momentum in the market place to satisfy Federal needs and isolate areas where the pace or interest in the market may not be addressing Federal needs and FEMP may have a role as a technology developer or market advocate.

The primary market for metering and billing products and services remains utilities and utility-like power marketers who need these systems to track and bill for energy use. Few systems are tailored specifically from the customer perspective. However, systems deployed by power marketers tend to be more customer-oriented than those of incumbent utilities. The bottom line is that Federal agencies do benefit from having better energy use data, but the market may be a bit immature to meet these needs across the country.

The current market presents a good news-bad news situation. The goods news is that there is no shortage of commercially available products and services that could be used to meet the needs of most Federal agencies for metering and billing, now and in the future. In fact, the market is demanding more and more "futuristic" services from providers, which means commercial products should only get better and better. Unfortunately, this may be a market like personal computers were before Microsoft became dominant. There continues to be a lack of standardization; thus, there is a risk that not all of the vendors will survive. The bad news is that picking the wrong technology could be a costly mistake. Moreover, the best solution probably requires combining hardware, communication systems, and software from a variety of sources. If poor choices are made, or vendors disappear, buyers may be left without support resources. Unfortunately, that is not an uncommon outcome for government procurements.

There are several paths forward. One is to try to develop specifications for metering and billing components and attempt to assemble a system that meets agency needs. An alternative would be to approach the market for metering and billing as a service. This approach has the advantage that power marketers are already providing this service to Federal customers in deregulated areas. Firms could be solicited to expand this service to other areas, with or without deregulation. A third approach would be to prepare for deregulation by establishing standards for power meters and equipment. A variation would be to specify a standard meter to be installed. Unfortunately, this approach has many pitfalls. Finally, agencies could adopt a wait-and-see attitude and continue to learn from experience with a variety of vendors and products. Unfortunately, this does not facilitate the data collection, exchange, and coordination that is presumably needed.

Based on this initial set of activities, it appears there is a role for FEMP to play monitoring this topic and coordinating among agencies. It is likely that new technology or other tools may be needed and FEMP will have a role in developing these as well.

Recommended next steps

The primary recommendation that emerges is that Federal efforts in this area should be pooled and solutions pursued, both strategically and collaboratively. This could include agencies jointly defining needs, setting goals and schedules, and taking action. The following actions are proposed:

- FEMP will continue to monitor this area and report periodically back to the IATF subcommittee and the IATF itself.
- GSA and FEMP will jointly sponsor a conference and trade show for key staff in agencies interested in this topic.
- The IATF subcommittee will provide a forum for future collaboration.

Attachment F

State-by-State Restructuring Update

*Yellow shading indicates the state has passed deregulation legislation.

State	Executive/Legislative Activity	Commission Activities	Utility Activities	Gas Restructuring	Stranded Cost Recovery	Public Benefits	Mergers
Alabama		— 10/99 PSC completed its initial review of industry restructuring. PSC staff will prepare a white paper on tax issues relating to deregulation.		– 7/99 No unbundling.	— 1996 law guaranteeing full stranded cost recovery.		
Alaska	– 6/99 Report was issued setting forth the proposed steps for the Legislature to implement a limited market pilot program.			– 7/99 No unbundling.			
Arizona	— 5/98 HB 2663 enacted, affirming ACC's authority to require utilities in open territories to compete; competition will phase-in 20 percent by December 31, 1998, and 100 percent by December 31, 2000; the bill extends competition to municipals and other publicly owned utilities.	– 9/99 ACC revised its competition rules to allow small users to aggregate electric loads during the transition to a competitive retail market.	– 7/99 Arizona Public Service (APS) Company began serving customers in Salt River Project's service territory.	– 7/99 No unbundling.	— 4/99 ACC approved five stranded cost recover options: net revenues lost, divestiture/auction methodology, financial integrity methodology, settlement methodology, and alternative methodology.		
Arkansas	— 4/99 SB 791 enacted to begin retail competition January 1, 2002.	– 6/99 PSC issued a time line for implementing customer choice. Utilities are required to file rate unbundling plans and stranded cost estimations by January 2000. — 4/99 PSC given the authority to push deregulation back to June 30, 2003.	– 6/99 Tucson Electric Power could open its retail market in October.	– 7/99 No unbundling.		– 10/99 PSC released its stranded cost plan. Recovery amounts will be levelized during the 53-month transition period.	

State	Executive/Legislative Activity	Commission Activities	Utility Activities	Gas Restructuring	Stranded Cost Recovery	Public Benefits	Mergers
California	– 9/99 SB 96 passed changing CalSO into a multi-state regional transmission organization.– 9/96 AB 1890 enacted to restructure the electric power industry.	– 10/99 PUC issued a draft order establishing a two-pronged investigation into the impacts of distributed generation. – 6/99 PUC began public hearings on opening distribution services to competition. — 5/99 CEC began implementing power content labels.	— 6/99 SMUD given approval for a retail competition program for up to 300 MW of its total load. – 6/99 PUC approved SDG&E's proposal to end it rate freeze in July 2001.	– 7/99 Statewide unbundling - implementation phase.	— 9/97 AB 360 allows utilities to issue $7.3 billion in bonds to pay off investments.	– 9/96 AB 1890 continues energy efficiency programs.	– 11/99 Sierra Pacific announced plans to purchase PGE. – 6/99 PUC approved the purchase of Pacificorp by Scottish Power.
Colorado	– 8/99 A stakeholder panel created by the Legislature began a series of hearings on deregulation.	– 10/99 Panel studying deregulation is taking another look at the issue after a 17-11 vote against it. — 5/99 Initial deregulation panel findings indicate rates could increase 33 percent.		– 7/99 Statewide unbundling - implementation phase.		— 5/99 PUC considering a systems benefit charge to generate $55 million for low-income consumers.	
Connecticut	— 5/99 On January 1, 2000, commercial and residential customers in 23 distressed municipalities will be able to choose their electric supplier.	– 8/99 DPUC ruled to allow suppliers to enter into contracts for electricity generation services with end users after July 1, 1999 for delivery after December 31, 1999.	– 7/99 Connecticut Power & Light cuts rates by 10 percent and unbundles services.	-- 7/99 No Unbundling.		– 3/99 DPUC began consumer education effort.	– 10/99 ConEd purchased Northeast Utilities. – 7/99 Energy East and Connecticut Energy filed a merger application.

State	Executive/Legislative Activity	Commission Activities	Utility Activities	Gas Restructuring	Stranded Cost Recovery	Public Benefits	Mergers
Delaware	— 3/99 HB 10 enacted to phase-in retail competition from October 1999 through April 2001.	– 11/99 PSC is investigating the impacts of deregulation on system reliability. – 9/99 PSC issued final orders for implementing HB 10. – 8/99 PSC imposed electric competition rules that mandate a minimum service period for customers who choose an alternative supplier, force suppliers to disclose information about their fuel mix and outline the terms of their standard offer service.		– 7/99 Pilot programs - partial unbundling.	– 9/99 Conectiv is permitted to recover $16 million in stranded costs. – 8/99 PSC allowed distribution utilities to seek approval of a charge to recover additional costs that may be incurred as a result of the customer switching suppliers.	— 3/99 HB 10 established a $1.5 million environmental fund.	
District of Columbia	N/A	– 12/99 PSC approved PEPCO's restructuring plan allowing a pilot program to begin January 2001 if the necessary tax and enabling legislation is passed by April 2000. — 6/99 PUC issues a report recommending 2-year pilot choice program to begin on January 1, 2001.		– 7/99 Pilot programs - partial unbundling.			

State	Executive/Legislative Activity	Commission Activities	Utility Activities	Gas Restructuring	Stranded Cost Recovery	Public Benefits	Mergers
Florida		– 2/99 PSC ruled that investor owned utilities must disclose the source of their generation and purchased power.		– 7/99 No unbundling.		– 8/99 Four utilities signed an agreement to develop green pricing programs. – 6/99 PSC approved a plan to allow consumers in the City of New Smyrna Beach to voluntarily contribute to a renewable resources fund.	
Georgia		— 1/98 PSC issued a Staff Report on Electric Industry Restructuring. Recommendations include market-based rates, unbundled services, and stranded cost recovery.		– 7/99 Statewide unbundling - implementation phase. '-- 5/99 Consumers have until August 11, 1999 to choose from one of 20 natural gas suppliers or one will be chosen for them.			
Hawaii	-- 4/99 Legislative resolution passed to require the PUC to submit a report on restructuring prior to the 2000 legislative session.	– 4/99 PUC opened a restructuring docket.		– 7/99 No unbundling.			
Idaho			– 6/99 Idaho Power concluded its energy efficiency program.	– 7/99 No unbundling.			

State	Executive/Legislative Activity	Commission Activities	Utility Activities	Gas Restructuring	Stranded Cost Recovery	Public Benefits	Mergers
Illinois	– 7/99 Governor Ryan amended 1997 restructuring law to include a 5 percent rate reduction in October 2001 and retail choice in June 2000. – 6/99 Commerce Committee held hearings to determine reliability.	– 12/99 ICC staff is meeting with utilities and alternative suppliers to rewrite regulations governing service standards. — 4/99 ICC rules that utilities must disclose the source of their generation.	– 6/99 ComEd must spend $2 billion through 2004 improving its transmission and distribution systems.	– 7/99 Pilot programs - partial unbundling.	— 12/97 HB 362 allows for the recovery of stranded costs based on a formula for lost revenue.	– 7/99 $250 million fund for energy efficiency, renewables, and environmental preservation approved.	– 6/99 Dynergy and Illinova merged. – 6/99 AES acquired New Energy Ventures.
Indiana	– 12/99 Lawmakers announced they will not consider deregulation legislation in the 2000 session.			– 7/99 Pilot programs- partial unbundling.			– 6/99 Indiana Energy and SIGCORP plan to merge.
Iowa		— 4/99 IUB concludes regulators should only deregulate generation services.		– 7/99 No unbundling - considering action.			
Kansas		– 7/99 KCC approved a resolution allowing Wichita City Council to create a buying group if deregulation passes.		– 11/99 KCC filed an approach to deregulating the state's natural gas industry.			– 12/99 Western Resources cancelled the proposed merger with KCPL.
Kentucky	– 6/99 Report to the Special Task Force on Electricity Deregulation concluded that prices will increase under competition.		– 4/99 KU and LG&E rates reduced by $52 million over five years.	– 7/99 No unbundling - considering action.			
Louisiana		— 4/99 PSC issued order requiring its staff to write a proposal for a deregulation pilot program that will take effect January 1, 2001.		– 7/99 No unbundling.			– 8/99 PSC conditionally approved the merger of AEP and CSW.

State	Executive/Legislative Activity	Commission Activities	Utility Activities	Gas Restructuring	Stranded Cost Recovery	Public Benefits	Mergers
Maine	— 5/97 LD 1804 enacted allowing retail competition on March 1, 2000 and features a market share cap of 33 percent in old service areas for large IOUs, a divestiture of generation assets by March 2000, and 30 percent of generation must be from renewable sources.	– 5/99 PUC issued a schedule to suppliers to offer standard service when retail competition begins in March 2000. — 4/99 PUC approved the first license to a competitive electric supplier allowing the Maine Health and Higher Educational Facilities Authority to market.		– 7/99 No unbundling - considering action.	— 5/97 LD 1804 allows recovery of stranded costs after reasonable mitigation efforts, but deferred detailed decisions to the 1998 legislative session.	— PUC has proposed $8.8 million per year for energy efficiency via a statewide charge embedded in distribution rates.	– 6/99 Energy East & Central Maine Power Group announced plans to merge.
Maryland	— 4/99 SB 300/HB 703 enacted allowing retail competition beginning July 2000.			– 11/99 PSC issued a final order deregulating the state's natural gas industry.	— 12/97 PSC order allows utilities recovery of stranded costs.		
Massachusetts	— 11/97 Legislation enacted restructuring the electric power industry. Retail access required by March 1998.			– 7/99 Statewide unbundling - implementation phase.	— 11/97 Legislation allows full recovery of stranded cost over a 10-year transition period.	— 5/98 Education program and disclosure labels begin.	– 11/99 Energy East's purchase of BEC Energy was finalized.
Michigan	– 12/99 A draft bill will be introduced by Senator Matt Dunaskiss on January 12, 2000. Hearings are scheduled to begin January 25, 2000.	– 7/99 Michigan Supreme Court ruled that the PSC lacks the authority to force utilities to open their service territories to competition. – 7/99 PSC proposed a retail choice program for all consumers beginning September 1999.	– 12/99 Consumers Energy will provide customer choice by January 2002. – 5/99 Detroit Edison began electric choice lottery for 7 large industrial customers.	– 7/99 Pilot programs - partial unbundling.	– 12/99 Consumers Energy reached an agreement with stakeholders to allow for full recovery of stranded costs.	– 6/99 PSC allocated $26.7 million for education about customer choice.	– 12/99 Michigan agreed not to oppose the merger of AEP and CSW. – 10/99 DTE Energy announced its intentions to purchase MCN Energy Group.

State	Executive/Legislative Activity	Commission Activities	Utility Activities	Gas Restructuring	Stranded Cost Recovery	Public Benefits	Mergers
Minnesota				– 7/99 No unbundling - considering action.		– 7/99 SF 1357 allows utilities to spend less energy on conservation programs.	— 4/99 New Century Energies and Northern States Power announced definitive merger agreement.
Mississippi	— 9/98 First legislative hearings on restructuring held. — 3/97 HB 1130 authorized the PSC to consider alternative methods of regulating the electric and gas industries.	— 6/98 PSC issued a Revised Proposed Plan for retail competition that addresses the comments received from hearings. Retail competition will be phased-in beginning January 1, 2001 through January 1, 2004 pending authorizing legislation.		– 7/99 No unbundling.			
Missouri				– 7/99 No unbundling.			– 12/99 KCPL-Western merger cancelled.
Montana	— 4/97 SB 390 was enacted allowing large industrial consumers retail access by July 1998 and all consumers by July 2002. The bill includes a two-year rate freeze beginning July 1998.	– 12/99 Regulators are preparing to debate the rules governing advertising and labeling of electricity sold competitively. – 10/99 PSC held a round table discussion to examine the commission's proposed rules for the selection of default electricity suppliers.	– 7/99 Montana Power will lower rates after a generation assets sale to PP&L Global.	– 7/99 Pilot program - partial unbundling.	— 11/98 SB 390 allows recovery of stranded costs through nonbypassable customer transition charges. It also allows for securitization for financing certain transition costs.	— 5/97 Energy efficiency and renewable energy funds for research and development collected through a universal system benefit charge.	

State	Executive/Legislative Activity	Commission Activities	Utility Activities	Gas Restructuring	Stranded Cost Recovery	Public Benefits	Mergers
Nevada	– 6/99 Assembly voted to delay competition until March 1, 2000 and permits utilities to share their logos with unregulated subsidiaries.			– 7/99 No unbundling - considering action.			
New Hampshire	– 6/99 Bill passed the House and Senate to allow PSNH to securitize its stranded costs and reduce rates by 15 to 20 percent. – 6/99 Net metering law enacted for customers with 25 KW or less of renewable generation.	– 7/99 PSNH will submit a final detailed restructuring plan August 1, 1999.		– 7/99 No unbundling - considering action.	– 7/99 PSNH permitted to recover $1.9 billion in stranded costs.	— HB 1392 funds low income programs.	— 9/99 PUC approved the merger of NEES and National Grid.
New Jersey	—5/99 Customer choice delayed until late October 1999.	– 10/99 Electricity suppliers are required to use Environmental Characteristics Labels. – 7/99 BPU approved provisions to allow net metering and drafted an order establishing an interim renewable portfolio standard of 6.5 percent.		– 7/99 Statewide unbundling - implementation phase. — 2/99 choice of natural gas supplier begins December 1999		– 6/99 State launched consumer education and retail choice program.	
New Mexico	— 4/99 S 428 enacted allowing retail choice beginning January 2001.			– 7/99 Statewide unbundling - active programs.			
New York	– 12/99 Legislature is considering eliminating the state's gross receipts tax on the sale of electricity and natural gas. — 4/99 A 6776 and S 3415 introduced to allow competition on an aggregate basis and directs the PSC to establish uniform tariff provisions and operating agreements for all utilities.	– 6/99 PSC approved a plan to allow competition for metering services.		– 7/99 Statewide unbundling - active programs.		— 7/98 PUC ordered $78 million per year for a systems benefits charge to fund energy efficiency, low income programs, and energy efficiency.	

State	Executive/Legislative Activity	Commission Activities	Utility Activities	Gas Restructuring	Stranded Cost Recovery	Public Benefits	Mergers
North Carolina	-- 3/99 report issued concluding that residents in cities served by nuclear power could see rate increases with deregulation.	– 7/99 Utility Commission is holding informational stakeholder hearings.		– 7/99 No unbundling.			
North Dakota	-- No current activity.			– 7/99 No unbundling.			
Ohio	— 7/99 bill enacted providing retail choice in 2001, guarantees a 5 percent rate reduction, and cuts property tax. – 7/99 passed HB 384 to triple the coal usage tax credit beginning January 1, 2000.	– 12/99 PUCO finalized its rules for restructuring.		– 7/99 Statewide unbundling - implementation phase.	– 7/99 Legislation allows PUC to determine stranded costs.	– 7/99 Restructuring law provides $33 million between 2001 and 2005 for consumer education and a $100 million revolving loan fund for energy efficiency projects.	
Oklahoma	– 10/99 The Joint Electric Utility Task Force issued a report that will contribute to the development of proposed legislation to be drafted by the end of the year for introduction in the next legislative session. — 6/98 SB 888 was enacted to speed up the time line for restructuring. Studies must be completed by October 1999. — 4/97 SB 500 enacted allowing retail competition by July 2002.	– 6/99 OCC held a roundtable discussion on deregulation. Talks will continue throughout the summer.	– 5/99 OCC and ONG agree to a deregulation plan that includes $5 million per year rate reduction beginning September 1, 1999.	— 4/99 OCC ruled to delay the start of natural gas restructuring from October 1, 1999 to June 1, 2001 for gas utilities that serve more than 250,000 customers.	— 4/97 SB 500 requires each entity to propose a recovery plan for stranded costs.		

State	Executive/Legislative Activity	Commission Activities	Utility Activities	Gas Restructuring	Stranded Cost Recovery	Public Benefits	Mergers
Oregon	– 7/99 SB 1149 passed allowing retail competition for commercial and industrial customers only.	– 1/00 PUC working to establish a consensus on major restructuring issues based on several proposed rules the PUC drafted.		– 7/99 No unbundling.	– 12/99 PUC drafted proposed rule that allows utilities to recover 100 percent of stranded costs by passing the costs on to consumers.		– 11/99 Sierra Pacific announced plans to purchase PGE. – 11/99 PUC approved the merger of Scottish Power and Pacificorp
Pennsylvania	— 12/96 HB 1509 enacted to allow consumers to chose among competitive suppliers beginning with one-third of the state by January 1999, two-thirds by January 2000, and all consumers by January 2001.			– 6/99 Natural Gas Choice & Competition Act enacted to establish July 1, 2000 as the deadline for choice of natural gas supplier.	— 12/97 HB 1509 allows stranded cost recovery through CTCs. The legislation expects utilities to use reasonable mitigation measures.	– 6/99 Electric Choice Program will introduce new series of customer advertisements. — law requires energy efficiency and low income funding at existing levels	– 11/99 ComEd and PECO filed merger applications. – 9/99 PECO Energy and Unicom announced merger plans.
Rhode Island	— 8/96 Rhode Island Utility Restructuring Act of 1996 enacted allowing retail choice beginning in July 1997 and continuing in phases.	— 1/98 Retail access was implemented with 25 registered generation suppliers but the standard offer interim rates offered by the state's IOUs are low enough that no real competition has occurred.		– 7/99 No unbundling.	— customer transition charge of 2.8 cents per kilowatt hour from July 97 through December 2000.	'-- keep existing subsidized rates for LI, funds collected in distribution rates	-- 6/99 PSC is considering the merger of Newport Electric with Blackstone Valley Electric and Narragansett Electric..
South Carolina	— 9/99 State lawmakers resumed their review of deregulation legislation.			– 7/99 No unbundling - considering action.			

State	Executive/Legislative Activity	Commission Activities	Utility Activities	Gas Restructuring	Stranded Cost Recovery	Public Benefits	Mergers
South Dakota	-- No new activity.		– 7/99 Black Hills Power & Light agreed to freeze its rates for give years.	– 7/99 Pilot programs - partial unbundling.			
Tennessee				– 7/99 No unbundling.	-- 8/97 TVA decided to increase rates by 5.5 percent for 10 years to pay off debt		
Texas	– 6/99 SB 7 enacted requiring retail competition in January 2002. Rates will be frozen for 3 years and then a 6 percent rate reduction will be implemented. The law requires an increase in renewable generation and 50 percent of new capacity to be natural gas fired. Utilities must unbundle rates.	– 12/99 Regulators are expected to issue rules on rate unbundling and business separation. – 12/99 Regulators drafted a code of conduct to ensure fair market competition.	– 7/99 PUC approved the formation of a new utility called Sharyland Utilities.	– 7/99 No unbundling. – 5/99 bill proposed to give natural gas producers $130 million tax break over the next seven years on wells drilled after January 1, 2000 and used to produce electricity.	— SB 7 provides for the recovery of all net, verifiable, nonmitigated stranded costs.		— AEP and CSW continue merger negotiations.
Utah	– 2/99 repealed a rate freeze from the prior session.			– 7/99 No unbundling.			
Vermont	– 7/99 Proposal requires electric utilities to transfer their energy efficiency and demand side management programs to a statewide efficiency utility.	– 7/99 New plan requires electric utilities to transfer their energy efficiency and demand side management programs to a statewide efficiency utility.		– 7/99 No unbundling - considering action.			
Virginia	– 3/99 AB 1269 signed into law calling for customer choice to be phased in beginning January 1, 2002. The bill establishes a net metering requirement for small solar, wind, and hydroelectric systems.	– 9/99 SCC is seeking the authority to determine competitive metering and billing rules.	– 7/99 Mecklenburg & Rappahannock Cooperatives voted to implement retail choice programs by next summer.	– 7/99 Pilot programs - partial unbundling.	— HB 1172 allows for recovery of net stranded costs.	– 12/99 SCC unveiled a five-year $30 million program to educate consumers about retail competition.	– 10/99 SCC approved the merger of Dominion Resources and Consolidated Natural Gas

State	Executive/Legislative Activity	Commission Activities	Utility Activities	Gas Restructuring	Stranded Cost Recovery	Public Benefits	Mergers
Washington	— No current activity.			– 7/99 No unbundling.			
West Virginia		– 9/99 Stakeholders submitted a restructuring proposal calling for retail competition beginning in 2013. – 8/99 PSC is holding public hearings on restructuring.		– 7/99 Statewide unbundling - active programs.		– 8/99 PSC approved the Dominion Resources and Consolidated Natural Gas merger.	
Wisconsin	– 10/99 State lawmakers passed Reliability 2000, relaxing a 14 year old asset cap on investments if utility holding companies contribute their transmission facilities to a state ISO. — 3/99 Governor approved a budget for the PSC to conduct a 12-month deregulation study.		– 7/99 Wisconsin utilities are required to divest their transmission system assets and transfer them to an independent transco in an energy pact made with the Governor.	– 7/99 Pilot programs - partial unbundling.			
Wyoming	— No new activity			– 7/99 Pilot programs - partial unbundling.			

Sources:

American Council for an Energy Efficient Economy, *Summary Table of Public Benefits Programs and Electric Utility Restructuring*, December 1999.
American Public Power Association, *The Electric Utilty Industry: State Legislative/Regulatory Restructuring Summary*, December 1999.
Energetics, *Utility Restructuring Weekly*, 1999-2000.
Energetics, *FEMP Monthly Update*, 1999.
Energy Information Administration, *Status of State Electric Industry Restructuring Activity*, December 1999.

Attachment G

INTERAGENCY ENERGY MANAGEMENT TASK FORCE
RESTRUCTURING SUBCOMMITTEE

Objective, Goals, and Activities

OBJECTIVE

Provide information to enable Federal agencies to capitalize on opportunities in a changing energy marketplace using direct communication and education activities.

Information needs in the following areas will be addressed:

1. Utility deregulation policies, issues and guidance;
2. The implementation of *Executive Order 13123, Greening the Government through Efficient Energy Management*, as it relates to restructuring;
3. Planning and soliciting for electricity purchases; developing effective negotiation strategies for deregulation;
4. Lessons learned experiences and guidance on a restructured energy industry;
5. Emerging opportunities in a changing energy market, including emerging technologies, products, and services.

GOALS	ACTIVITIES
COMMUNICATE ***A. Keep the Federal staff informed of electricity restructuring policies and issues.***	1. Maintain communication and education efforts for 5,000+ federal facility, utility, energy and procurement staff and managers, making them more aware of technical guidance and assistance within the Federal Government: 2. Use electronic media, such as e-mail and web sites, to ensure consistent information and facilitate rapid circulation. 3. Maintain a list of interagency, regional and national experts and appropriate staff within the Federal Energy Management Program (FEMP), General Services Administration (GSA), and Defense Energy Support Center (DESC). 4. Select and publish relevant articles on deregulation in *FEMP Focus* and other sources of information. 5. At conferences and meetings, establish a dialogue to educate and address questions from Federal agencies on restructuring. These events may include the FEMP Annual Energy Conference, Federal Utility Partnership Working Group

	meetings, GSA Annual Utility Conference and industry-sponsored meetings held by the Edison Electric Institute, American Council for an Energy Efficient Economy, and the Association of Energy Engineers.
B. Provide information on the implementation of Executive Order 13123, Greening the Government through Efficient Energy Management, as these activities relate to restructuring.	1. Inform Federal staff of the Administration policies and goals on increasing energy efficiency and renewable energy purchases, as they relate to restructuring. 2. Advise Federal agencies of restructuring related E.O. working group proposals and recommendations of the Interagency Energy Management Task Force. 3. Establish follow-on restructuring-related activities that assist Federal agency staff when implementing *E.O. 13123*.
C. Improve interagency communication on energy and renewable resource purchasing issues in a deregulated environment.	1. Provide a discussion forum on Federal energy and renewable resource purchasing. 2. Publicize the capabilities of FEMP, GSA, and DESC. 3. Identify and establish sources for technical guidance and assistance on facility energy/utility issues, market research, acquisition planning, solicitation, and negotiating strategies.
EDUCATE & ENABLE ***D. Communicate "lessons learned" experiences and guidance on a restructured energy industry.***	1. Use existing vehicles for Federal agency staff to gain a better understanding of the market, its opportunities, "lessons learned," and to exchange ideas, concepts, and experience from the private sector and the government. 2. Provide sources for guidance on effective acquisition and negotiation strategies when purchasing electricity in a restructured marketplace with competition.
E. Undertake activities related to opportunities in a changing energy marketplace.	1. Address restructuring-related issues as they surface and as approved by the Interagency Energy Management Task Force.